

REMARKS

The final Office Action mailed July 21, 2005, has been carefully studied. Upon entry of the present amendment, the claims in the present application will be claims 6, 7 and 10-14. Applicant again submits that applicant's claims define novel and unobvious subject matter, and meet all other requirements for patentability, and therefore should be allowed. Accordingly, applicant respectfully requests favorable reconsideration, entry of the amendments presented above (two claims are cancelled, so even if the present application is not allowed, as it should be, the amendment should be entered for purposes of appeal), and allowance.

Certain amendments are proposed above in order to advance prosecution, such amendments being proposed without prejudice to applicant's rights to pursue broader claims in a continuing application, if applicant chooses to do so, and without penalty, applicant relying on Sections 121 and 120.

(1) In claim 6, the film or sheet of the substrate is specified as being flexible as was already implicit in the claims as previously pending.

(2) In claim 12, the applicant specifies the term "plastic film" to "polyethylene film or polyester film".

Applicant believes that the rejection to claim 12 should be clearly overcome by this amendment.

(3) In claim 7, the carrier is specified as being "a powder of porous glass having pore size of from 0.1 to 0.5 μm ". Applicant believes that the claimed subject matter is not disclosed in Stein et al and is not obvious from Stein et al in view of Dusterhoft et al. Dusterhoft et al does not teach or suggests micro-particles made of porous glass, but discloses only those made of a polymer.

(4) New claim 14 is added, dependent on claim 7. It is patentable for the same reasons as claim 7.

Claims 12 and 13 have been rejected under the first paragraph of Section 112. This rejection is respectfully traversed.

As indicated above, claim 12 is proposed to be amended to specify that the organic films are polyethylene or polyester, and best supported in applicant's specification. On the other hand, applicant wishes to be clear on the record that applicant does not agree with and does not accept the rejection, and maintains that applicant's invention as described is clearly as broad as claim 12 as pending prior to the proposed amendments submitted above.

Withdrawal of the rejection is in order and is respectfully requested.

Claims 6, 7 and 9-11 have been rejected under Section 102 as anticipated by Stein. This rejection is again respectfully traversed.

As defined in applicant's claim 6, the present invention is directed to a reaction probe chip for binding analyte to be detected. The object of the present invention is to provide a stack of the chips which will be a commercial product. Each of the chips of the present invention is in the form of flexible film or sheet made of an organic material, due to convenience upon separating or peeling away each of the chips. When using the chips for analysis, users will separate or peel one of the chips from the stack and place it in a reaction cell to bring the chip into contact with a sample to be detected.

As described in, for example, Example 2 of the present application, the stack of chips can be prepared by first preparing a polyester substrate in the form of sheet (e.g., length 50 mm, width 30 mm, thickness 0.3 mm) having an arrangement of through-holes of 2 mm in diameter. A glass fiber filter paper is sandwiched between the substrates, and the composite is heat sealed to prepare a

reaction chip substrate. One hundred of the substrates, for example, are superposed one on another, and reagents are sequentially passed through the respective holes vertically communicating with each other to synthesize different oligonucleotides.

On the other hand, Stein neither discloses that a substrate in the flexible form of sheet or film is made of flexible organic material, nor teaches that after producing chips, each of the chips is capable of use by separating or peeling to separate chips.

Further, Stein does not teach as a carrier a powder of porous glass having pore sizes of from 0.1 to 0.5 μm as defined in amended claim 7. The pore sizes of the powder of porous glass are important because the effective surface area of the carrier is increased. However, too small a pore size makes it difficult to filter the fluorescence labeled sample. (Please refer to page 10, lines 24-29 of applicant's specification.)

Applicant's claims are not anticipated by Stein. Withdrawal of the rejection is in order and is respectfully requested.

Claims 12 and 13 have been rejected under Section 103 as being obvious from Stein. The rejection is respectfully traversed.

It has been pointed out above that claim 6 defines not only novel subject matter over Stein, but also non-obvious subject matter over Stein. Claims 12 and 13 depend from and incorporate the subject matter of claim 6, and therefore are patentable because of the incorporated subject matter from claim 6. Moreover, by the very nature of the rejection based on Section 103, the PTO acknowledges that Stein does not disclose the features of the dependent portions of claim 12 and 13.

The PTO takes the position that "heat sealed" is a process limitation and therefore may be brushed aside or ignored. Respectfully, this is not correct. The term "heat sealed" is like the terms "press fitted", "etched" and "welded", namely structural recitations. Please see *In re Garnero*, 162 USPQ 221, 223:

The trouble with the solicitor's approach is that it necessarily assumes that claim 1 should be construed as a product claim containing a process, rather than structural limitation. However, it seems to us that the recitation of the particles as "interbonded one to another by interfusion between the surfaces of the perlite particles" is as capable of being construed as a structural limitation as "intermixed", "ground in place," "press fitted," "etched,"

and "welded," all of which at one time or another had been separately held capable of construction as structural, rather than process, limitations. [footnote omitted]

Moreover, even if "heat sealed" is considered a process recitation, that does not mean that it may be ignored or brushed aside. Please see *In re Luck et al*, 177 USPQ 523, 525 (1973) where the Court stated:

...., it is well established that product claims may include process steps **to wholly or partially define the claimed product** [citation omitted], and the cases cited therein. To the extent these process limitations distinguish the **product** over the prior art, they must be given the same consideration as traditional characteristics (*italics in original; other emphasis added*).

Thus, if a process recitation imparts to the resultant structure a characteristic which is inherent to the process recitation, then that product as claimed possesses that characteristic.

It should be abundantly clear that a pair of plastic films heat sealed together with filter paper sandwiched therebetween is inherently structurally different than anything disclosed or made obvious by Stein.

Withdrawal of the rejection is in order and is respectfully requested.

Claim 8, proposed above to be deleted without prejudice to applicant's rights, has been rejected as

obvious under Section 103 from Stein in view of Dusterhoft.
For the record, this rejection is also respectfully
traversed.

The rejection points out that Dusterhoft teaches
the claimed pore size of micro-particles. Dusterhoft
teaches a method for producing microporous elements and
microporous elements obtainable by such method. However,
Dusterhoft does not teach microporous elements made of
glass, which are claimed in claim 7 of the present
application.

Accordingly, even if the combination were obvious,
which applicant respectfully denies, the resultant
reconstruction of Stein in view of Dusterhoft would not
reach the claimed subject matter. Accordingly, claim 7
defines non-obvious subject matter over Stein in view of
Dusterhoft.

With respect to the short paragraphs 12 and 13
appearing on page 8 of the final action, applicant never
asserted that any additional prior art was not pertinent,
but applicant did assert that it was not **sufficiently**
pertinent to warrant its application against any of
applicant's claims. Actually, applicant should more
accurately have stated that such prior art, cited but not

applied, is not sufficiently "material to patentability" to warrant application against any of applicant's claims.

Applicant believes that all issues raised in the final action have been addressed above in a manner which should lead to patentability of the present invention. If not, however, applicant has filed herewith a Notice of Appeal.

Applicant respectfully requests favorable reconsideration, entry of the amendments made above and allowance. If the examiner disagrees, applicant respectfully requests (1) a telephone call to undersigned if the examiner believes that any further amendments can be made to place the application in condition for allowance, or (2) at least entry of the present amendment for purposes of appeal in view of the fact that the number of issues on appeal will have been reduced by the cancellation of claims 8 and 9.

Respectfully submitted,
BROWDY AND NEIMARK, P.L.L.C.
Attorneys for Applicant(s)

By



Sheridan Neimark

Registration No. 20,520

SN:jec
Telephone No.: (202) 628-5197
Facsimile No.: (202) 737-3528
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